REMARKS

Status of the claims:

With the above amendments, claim 6 has been cancelled and claims 1-5 have been amended. Claims 1-5 and 7-8 are pending and ready for further action on the merits. No new matter has been added by way of the above amendments. The amendment to claims 1-5 has support on page 5, line 17 *et seq.* Reconsideration is respectfully requested in light of the following remarks.

Rejections under 35 USC §112, second paragraph

Claims 1-8 have been rejected under 35 USC §112, second paragraph as being indefinite. The Examiner asserts that a Poisson's ratio in a longitudinal direction (MD) and in a transverse direction (TD) are only for film in a tape form or for a film that has been oriented with directional properties.

The Examiner states, "(a) polymer film per se does not have MD or TD directions. Only a film in tape form or a film which has been oriented has directional properties." Applicants assert that this statement is erroneous. MD and TD directions of a film are determined automatically at the time of preparing the film, irrespective of whether or not the film will be formed into a tape or whether the film has been oriented or not. This

is well known among those persons skilled in the art. Thus, it is believed that the rejection is inapposite. Withdrawal of the rejection is respectfully requested.

Rejections under 35 USC §102

Claims 1 and 2 are rejected under 35 USC §102(b) as being anticipated by Tomaru '989 (US Patent No. 5,603,989). Presumably, the Examiner is using the disclosure at column 6, line 30 *et seq.* in Tomaru '989 to anticipate the instant claims. This rejection is traversed for the following reasons.

"A polymer film" of claims 1 to 5 has been changed to "an aromatic polyamide film". Tomaru '989 teaches a polyethylene terephthalate film having Poison's ratio of 0.2. Tomaru '989 fails to teach an aromatic polyamide film. Moreover, Tomaru '989 does not teach either how to make the polyethylene terephtalate film or how to measure the Poison's ratio. Accordingly, Tomaru '989 can not anticipate the instant invention because Tomaru '989 fails to disclose the elements of the instant invention. Withdrawal of the rejection is warranted and respectfully requested.

Rejections under 35 USC §103

Claims 4-8 are rejected under 35 USC §103(a) as being unpatentable over Tomaru '989 in view of Tsukuda '938 (US Patent

No. 5,993,938) and Tsukuda '220 (US Patent No. 6,274,220). The Examiner asserts that both of the Tsukuda '938 and Tsukuda '220 disclose aromatic polyamide film as a support (see column 13, line 31 and 50 and column 14, lines 39-53 in Tsukuda '938 and column 10, lines 54-55 and 65-66 and column 11, lines 40-44, and column 12, lines 3-8, and column 15, lines 22-24 in Tsukuda '220). This rejection is traversed for the following reasons.

Present Invention

The present invention discloses an aromatic polyamide film wherein the Poison's ratio of the longitudinal direction (MD) to the traverse direction (TD) is less than 0.4.

Disclosure of Tomaru '989

Tomaru '989 discloses a coating method in which a surface of a flexible support made of plastic film, paper, metal foil, or the like, is continuously and uniformly coated with a coating composition at a high speed by means of an extrusion coating apparatus. The object of the invention of Tomaru '989 is achieved by a coating method that includes continuously running a surface of a flexible support, supported by a pair of support rolls, along a back edge surface and a doctor edge surface. Then, the method comprises coating the surface of the support with a coating composition in a region between the pair of

support rolls by an extrusion coating apparatus which extrudes the coating composition continuously from a top end portion of a slot onto the surface of the support.

Disclosure of Tsukuda '938

Tsukuda '938 discloses an aromatic polyamide film, wherein at least one face thereof the number of projections of height at least 20 nm but less than 50 nm is from 10^3 to 10^8 per mm^2. The number of projections that have a height of at least 50 nm but less than 100 nm is from 0 to $3x10^4$ per mm^2. Further, Tsukuda '938 offers a method of producing an aromatic polyamide film. The method includes obtaining a solution by adding to an aromatic polyamide solution a particle-containing slurry formed by dispersing particles of particle diameter 10 to 300 nm in a liquid medium of 10 poise or less. The amount of said particles added relative to the aromatic polyamide is 0.005 to 4.5 wt %, with the relative standard deviation (in the diameters of said particles) being no more than 0.8. Furthermore, Tsukuda '938 discloses a particle-containing slurry where the initial filterability index Q1 of said particle-containing slurry and the filterability index Q2 after the passage of 500 ml of liquid satisfy the following relation. $Q2/Q1 \geq 0.3$

The film of Tsukuda '938 is used for flexible printed substrates, capacitors, printer ribbons, magnetic recording media, for computer external memory, and for digital video tape.

Disclosure of Tsukuda '220

Tsukuda '220 discloses aromatic polyamide resin moldings comprising at least one surface that is 1.0 nm or more in root-mean-square roughness and is 80 nm or less in 10-point average roughness. The roughness as determined by atomic force microscopy is 9.8 GPa or more in tensile Young's modulus at least in one direction. The aromatic polyamide resin moldings of Tsukuda '220 are used as material for film, or for film for magnetic recording medium that is resistant to scraping and has uniform surface protrusions.

Removal of Tomaru '989 in view of Tsukuda '938 and Tsukuda '220

As mentioned above, Tomaru '989 teaches a polyethylene terephthalate film having Poison's ratio of 0.2. Tomaru '989 fails to teach an aromatic polyamide film. Moreover, Tomaru '989 does not teach either how to make the polyethylene terephtalate film or how to measure the Poison's ratio. The Poison's ratio is greatly affected not only by the material but also by the higher structure of the material such as the state of crystallization and of orientation. So, in order to control

the Poison's ratio in the desired range, it is very important to stipulate the factors that have an influence on the higher structure of the material.

According to the present invention, a method of preparing an aromatic polyamide film is an important feature that determines the higher structure. It is necessary to control the conditions of processes for preparing the film in the following ranges to obtain an aromatic polyamide film having a Poison's ratio of less than 0.4.

In the longitudinal direction, the stretching ratio of the film is 1.0 - 2.0 times with a stretching velocity of 1 -100 %/sec. In the transverse direction, the stretching ratio of the film is 1.1- 3.0 times with a stretching velocity of 10 -100 %/sec and a stretching temperature of 200 - 350 °C.

Finally, the conditions are controlled such that $2\ V_{MD} < V_{TD}$, wherein V_{MD} is the stretching velocity in the longitudinal direction, and V_{TD} is the stretching velocity in the transverse direction.

As is understood from the results of Examples 1 to 3, 5 and 6, and Comparative Examples 1 and 2 in the present application (see Table 1), the above conditions are requisite for obtaining an aromatic polyamide film having a Poison's ratio of less than 0.4. The results of Example 4 and Comparative Example 3 demonstrate that the above conditions are not necessarily

applicable for obtaining a polyethylene terephthalate film having a Poison's ratio of less than 0.4. Tomaru '989 is also silent about conditions for preparing a Polyethylene terephthalate film having a Poison's ratio of 0.2. Tomaru '989 fails to teach the interrelation between the electromagnetic conversion characteristic and the Poison's ratio, and Tomaru '989 does not disclose or suggest obtaining a magnetic recording medium using an aromatic polyamide film having a specific Poison's ratio which causes no reading errors during high-speed recording/reproducing. Accordingly, Tomaru '989 cannot render obvious the instant invention.

These deficiencies are not made up by Tsukuda '938 and Tsukuda '220.

Each of Tsukuda '938 and Tsukuda '220 teaches an aromatic polyamide film for magnetic recording medium. However, neither Tsukuda '938 nor Tsukuda '220 discloses or suggests a Poison's ratio. Although Tomaru '989 teaches a Poison's ratio, its teaching is very limited, as is mentioned above. Accordingly, the present invention is not obvious over Tomaru '989 in view of Tsukuda '938 and Tsukuda '220. Withdrawal of the rejection is warranted and respectfully requested.

With the above remarks and amendments, it is believed that the claims, as they now stand, define patentable subject matter

such that a passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If any questions remain regarding the above matters, please contact Applicant's representative, Andrew D. Meikle, in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By _____

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows.

1. (Amended) An [polymer] aromatic polyamide film characterized in that the Poison's ratio of the longitudinal direction (MD) to the traverse direction (TD) is less than 0.4.

2. (Amended) [A] The [polymer] aromatic polyamide film according to claim 1, wherein the Poison's ratio is 0.1 to less than 0.3.

3. (Amended) [A] The [polymer] aromatic polyamide film according to claim 1, wherein the Poison's ratio is 0.01 to less than 0.1.

4. (Amended) [A] The [polymer] aromatic polyamide film according to claim 1, wherein the tensile modulus at least in one direction is at least 7 Gpa.

5. (Amended) [A] The [polymer] aromatic polyamide film according to claim 1, wherein the ratio of E_{TD}/E_{MD} of the tensile moduli of the transverse direction to the longitudinal direction satisfies:

$0.8 < E_{TD}/E_{MD} < 3.$